

# UVALUE CALCULATION

Users Ref: SF/Over/Under

Issued on: 11.August.2008

EES Ref:

Prop Type Ref:

Property:

SAP Rating: 0

Fuel Bill: £0

CO2 Emissions: 0.00 t/year

Energy used: 0.0 GJ per annum

Surveyor: 4944-0001, GRAHAM VARLEY, Tel: 01772 690360, Fax: 01772 690842

Address: VARLEY INSULATION, LEWTH LANE, WOODPLUMPTON, PRESTON LANCs PR40TD

Client: BDL001, Boulder Developments Ltd, Norwell, Nottinghamshire, NG23 6JN, Tel: 01636 636 348, Fax: 01636 832 909

Software Version: EES SAP 2005.013.build.0009, December 2007, BRE SAP Worksheet 9.70, 9.80

Regs Type: SAP 2001, Regs Region: England and Wales, Construction Type: New Build

Calculation method: BS EN ISO 6946, BS EN ISO 13370, BS 5250

## Building Elements:

### Building Element Roof 1

Roof Type: Pitched Roof, insulated sloping ceiling

Layer	Description	Thickness	$\lambda$	R	Fraction
<b>External surface</b>				0.100	
<b>Layer1</b>	<b>Tiling, Slate</b>				
	Main construction	20 mm	1.000	0.000	100.00 %
<b>Layer2</b>	<b>airspace/timber battens</b>				
	Main construction	22 mm	0.220	0.000	89.63 %
	Corrections - Cavity Ventilated, Emissivity: Normal				
	Bridging - Timber	22 mm	0.130	0.000	10.37 %
<b>Layer3</b>	<b>Breather membrane</b>				
	Main construction	1 mm	0.000	0.000	100.00 %
<b>Layer4</b>	<b>SF Cavity</b>				
	Main construction	25 mm	0.000	0.000	100.00 %
<b>Layer5</b>	<b>SF40 Including Air gaps each side</b>				
	Main construction	60 mm	0.017	3.564	100.00 %
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
<b>Layer6</b>	<b>SF Cavity</b>				
	Main construction	110 mm	0.000	0.000	100.00 %
<b>Layer7</b>	<b>SF19 Super Foil</b>				
	Main construction	38 mm	0.026	1.440	100.00 %
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
<b>Layer8</b>	<b>Standard cavity</b>				
	Main construction	25 mm	0.156	0.160	100.00 %
	Corrections - Cavity Unventilated, Emissivity: Normal				
<b>Layer9</b>	<b>12.5mm Gyproc Wallboard</b>				
	Main construction	13 mm	0.190	0.066	100.00 %
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
<b>Internal surface</b>				0.100	
<b>Total resistance:</b>		Upper limit = 5.430 m <sup>2</sup> K/W Lower limit = 5.430 m <sup>2</sup> K/W Average = 5.430 m <sup>2</sup> K/W			
		U-value (unrounded) = 0.1842 W/m <sup>2</sup> K			

Unheated space: None

**Total thickness: 313 mm**

**U-value: 0.18 W/m<sup>2</sup>K**